

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
14 July 2005 (14.07.2005)

PCT

(10) International Publication Number
WO 2005/063914 A3

- (51) International Patent Classification⁷: **C09J 153/02**,
C08F 297/04, C08L 53/02
- (74) Agent: **KORTEKAAS, Marcel**; Kraton Polymers Research B.V., Intellectual Property Services, P.O. Box 37666, NL-1030 BH Amsterdam (NL).
- (21) International Application Number:
PCT/EP2004/053592
- (81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date:
17 December 2004 (17.12.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
03104998.4 31 December 2003 (31.12.2003) EP
- (84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- (71) Applicant (*for all designated States except US*): **KRATON POLYMERS RESEARCH B.V.** [NL/NL]; Badhuisweg 3, NL-1031 CM Amsterdam (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): **DE KEYZER, Noël, Raymond, Maurice** [BE/BE]; Kraton Polymers Research S.A., Monnet Centre, Avenue Jean Monnet 1, B-1348 Otignies Louvain-La-Neuve (BE). **SOUTHWICK, Jeffrey, George** [US/US]; 19710 Laurel Park Lane, Houston, TX 77094 (US). **VAN DIJK, Cornelis, Martinus** [NL/NL]; Kraton Polymers Research B.V., Badhuisweg 3, NL-1031 CM Amsterdam (NL).
- Published:
— *with international search report*
- (88) Date of publication of the international search report:
15 December 2005
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: **LOW VISCOSITY, HOT-MELT STABLE ADHESIVE COMPOSITIONS**

(57) Abstract: Low viscosity, hot-melt stable adhesive composition, comprising: a) at least one block copolymer, comprising at least two terminal poly(vinyl aromatic) blocks and at least one central block of randomly copolymerised isoprene/butadiene mixtures in an isoprene/butadiene weight ratio of from 45/55 to 55/45, having a poly(vinyl aromatic) content in the range of from 17 to 20 %, a total apparent molecular weight in the range of from 180,000 to 190,000, a content of 1,2-vinyl bonds and/or 3,4 vinyl bonds, each in a proportion of at most 15 wt% in the conjugated diene blocks, and a coupling efficiency in the range of from 63-87 %, occurring in a weight proportion of from 40 to 45 wt%, relative to the weight of the complete composition; b) an aliphatic/aromatic hydrocarbon tackifying resin, containing less than 16 % by weight of aromatic structure as determined by H-NMR, a differential scanning calorimetry (DSC) glass transition temperature (T_g) between 30 and 55°C, and a Ring and Ball softening point between 85 and 95°C, and occurring in a weight proportion of from 45 to 55 wt%, relative to the weight of the complete composition; c) a plasticizer, in a weight proportion of from 5 to 15 wt%, relative to the weight of the complete composition, and adhesive tapes and labels, comprising said composition.



WO 2005/063914 A3